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SPECIFICATION FOR
HANDLOOM COTTON COATING
(*First Revision*)

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SPECIFICATION FOR HANDLOOM COTTON COATING

(*First Revision*)

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Indian Standard
SPECIFICATION FOR
HANDLOOM COTTON COATING
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 9 November 1981, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

0.2 This standard, which was first published in 1958, has been revised in order to make it up-to-date. Important changes carried out in the standard are:

- a) deletion of breaking strength values since the standard recommends the use of yarn conforming to IS : 171-1973*; and
- b) inclusion of inspection, marking and packing clauses.

0.3 Standards of Weights and Measures Act, 1976 stipulates the use of International System of Units in the country, in order to familiarize the industry with this system, the recommended SI units for use in the textile industry are given in Appendix A.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of four varieties of handloom cotton-coating, bleached, dyed striped or check.

*Specification for grey cotton yarn (*second revision*).

†Rules for rounding off numerical values (*revised*).

1.2 This standard does not specify the general appearance, feel, finish, shade, etc, of the cloth (*see also 3.3*).

2. MANUFACTURE

2.1 Yarn — The cotton yarn used in the manufacture of cloth should be satisfactory in evenness and reasonably free from neps and spinning defects. The yarn shall conform to Grade 'C' of IS : 171-1973*.

2.2 Cloth — The cloth shall be free from dressing and filling materials and from substances liable to cause subsequent tendering.

3. REQUIREMENTS

3.1 The constructional particulars of cloth shall conform to those given in Table 1.

3.2 The colour fastness ratings and other requirements of coating shall conform to those given in Table 2.

3.3 If in order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade of the cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

3.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

4. INSPECTION

4.1 The cloth when visually inspected should be reasonably free from the following defects:

- a) More than two adjacent ends running parallel, broken or missing and extending beyond 20 cm;
- b) Weft crack or more than two missing picks across the width of the material;
- c) Prominently noticeable weft bar due to the difference in raw material, count, lustre, etc;
- d) Noticeable selvage defects;
- e) Noticeable warp or weft float in the body;
- f) Noticeable oil or other stains;

*Specification for grey cotton yarn (*second revision*)

- g) Noticeable hole, cut or tear up to 3 mm in size;
- h) Smash rupturing the texture of the fabric;
- j) Undressed snarls noticeable throughout the piece;
- k) Conspicuous gout due to foreign matter usually lint or waste woven into cloth;
- m) Conspicuous broken pattern; and
- n) Any other flaw which would mar the appearance or affect the serviceability and/or durability of the cloth.

4.1.1 A reference may be made to IS : 4125-1967* for details of these defects.

5. MARKING

5.1 The cloth shall be suitably marked or labelled with the following information:

- a) Name of the material and variety number;
- b) Manufacturer's name, initials or trade-mark;
- c) Length and width of the piece; and
- d) Count of warp and weft yarn.

5.1.1 The cloth may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. PACKING

6.1 Unless otherwise agreed upon by the buyer and the seller, the cloth shall preferably be packed in bales or cases in conformity with the procedure laid down in IS : 1347-1972† or IS : 293-1980‡.

7. SAMPLING

7.1 Lot — The quantity of handloom cotton coating of the same variety, width and colour delivered to a buyer at a time shall constitute a lot.

*Glossary of terms pertaining to defects in fabrics.

†Code for inland packaging of cotton cloth and yarn (*first revision*).

‡Code for seaworthy packaging of cotton cloth and yarn (*third revision*).

TABLE 1 CONSTRUCTIONAL PARTICULARS OF HANDLOOM COTTON COATING

(Clause 3.1)

VARIETY No.	COUNT OF YARN (<i>see</i> NOTE 1)		ENDS/ cm	PICKS/ cm	LENGTH	WIDTH	WEAVE
	Cotton Count (Universal Count)						
	Warp	Weft					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					m	cm	
1.	20s/2 (30 tex × 2)	20s/2 (30 tex × 2)	18	16	20 or as declared	70, 75 or as agreed	Plain
2.	30s/2 (20 tex × 2)	20s/2 (30 tex × 2)	24	19			
3.	30s/2 (20 tex × 2)	30s/2 (20 tex × 2)	22	19			
4.	40s/2 (15 tex × 2)	40s/2 (15 tex × 2)	28	24			
Tolerance, percent	—	—	± 5	± 5	<i>see</i> Note 2	± 2	—
Method of Test	—	—	IS : 1963-1981*		IS : 1954-1969†		Visual

NOTE 1 — Count of yarn is given for guidance only.

NOTE 2 — The length shall be not less than the declared or marked value.

*Methods for determination of threads per unit length in woven fabrics (*second revision*).†Methods for determination of length and width of fabrics (*first revision*).

TABLE 2 REQUIREMENTS OF HANDLOOM COTTON COATING

(Clause 3.2)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST
(1)	(2)	(3)	(4)
i)	Colour fastness to:		
	a) Light	4 or better (see Note)	IS : 2454-1967*
	b) Washing : Test 4	3 or better (see Note)	IS : 765-1979†
ii)	Dimensional change, percent, <i>Max</i>	4	IS : 2977-1964‡
iii)	Scouring loss, percent <i>Max</i>	2.5	IS : 1383-1977§ (Mild Method)

NOTE — The rating specified is in accordance with IS : 6906-1982||, which is the basic document on colour fastness ratings to various agencies.

*Method for determination of colour fastness of textile materials to artificial light (xenon lamp).

†Method for determination of colour fastness of textile materials to washing: Test 4 (revised).

‡Method for determination of dimensional changes of woven fabrics (other than wool) on soaking in water.

§Method for determination of scouring loss in grey and finished cotton textile materials (first revision).

||Requirements for colour fastness of handloom cotton textiles (first revision).

7.2 To ascertain the conformity of the lot to the requirements of this standard, sample shall be drawn and inspected from each lot separately.

7.3 The number of pieces to be selected at random for inspection shall be in accordance with Table 3.

TABLE 3 SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING PIECES

LOT SIZE	SAMPLE SIZE	PERMISSIBLE NUMBER OF NON-CONFORMING PIECES	SUB-SAMPLE SIZE	PERMISSIBLE NO. OF NON-CONFORMING PIECES
(1)	(2)	(3)	(4)	(5)
Up to 25	3	0	2	0
26 „ 50	5	0	2	0
51 „ 150	8	0	3	0
151 „ 300	13	1	3	0
301 „ 500	20	1	5	0
501 „ 1 000	32	2	8	1
1 001 and above	50	3	8	1

7.4 Number of Tests and Criteria for Conformity

<i>Characteristic</i>	<i>Number of Tests</i>	<i>Criteria for Conformity</i>
Visual inspection, ends, picks, length and width	According to col 2 of Table 3	Number of non-conforming pieces not to exceed corresponding number given in col 3 of Table 3
Dimensional change	According to col 4 of Table 3	Number of non-conforming pieces not to exceed corresponding number given in col 5 of Table 3
Colour fastness to washing and scouring loss	do	All the test specimens meet the corresponding requirements
Colour fastness to light	2 for lot size of 300 or less and 3 otherwise	do

APPENDIX A*(Clause 0.3)***RECOMMENDED SI UNITS FOR TEXTILES**

<i>Sl No.</i>	<i>Characteristic</i>	<i>SI Unit</i>		<i>Application</i>
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
1.	Length	Millimetre	mm	Fibres Samples, test specimens (as appropriate) Yarns, ropes, cordage, fabrics
		Millimetre, centimetre	mm, cm	
		Metre	m	

SI No.	Characteristic	SI Unit		Application
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
2.	Width	Millimetre Centimetre Millimetre, centimetre	mm cm mm, cm	Narrow fabrics Other fabrics Samples, test specimens (as appropriate) Carpets, druggets, <i>DURRIES</i> (as appropriate)
3.	Thickness	Micrometre (micron) Millimetre	μ m mm	Delicate fabrics Other fabrics, carpets, felts
4.	Linear density	Tex Millitex Decitex Kilotex	tex mtex dtex ktex	Yarns Fibres Filaments, fila- ment yarns Slivers, ropes, cordage
5.	Diameter	Micrometre (micron) Millimetre	μ m mm	Fibres Yarns, ropes, cordages
6.	Circumference	Millimetre	mm	Ropes, cordage
7.	Threads in fabric			Woven fabrics (as appro- priate)
a)	Lengthwise	Number per centimetre Number per decimetre	ends/cm ends/dm	
b)	Widthwise	Number per centimetre Number per decimetre	picks/cm picks/dm	

SI No.	Characteristic	SI Unit		Application
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
8.	Warp threads in loom	Number per centimetre	ends/cm	Reeds
9.	Stitches in knitted fabric			Knitted fabrics (as appropriate)
	a) Lengthwise	Courses per centimetre Courses per decimetre	courses/cm courses/dm	
	b) Widthwise	Wales per centimetre Wales per decimetre	wales/cm wales/dm	
10.	Stitch length	Millimetre	mm	Knitted fabrics, made-up items
11.	Mass per unit area	Grams per square metre	g/m ²	Fabrics
12.	Mass per unit length	Grams per metre	g/m	Fabrics
13.	Twist	Turns per centimetre Turns per metre	turns/cm turns/m	Yarns, ropes, cordage (as appropriate)
14.	Test or gauge length	Millimetre, centimetre	mm, cm	Fibres, yarns and fabric specimens (as appropriate)
15.	Breaking load	Millinewton	mN	Fibres, delicate yarns (individual or skeins)
		Newton	N	Strong yarns (individual or skeins), ropes, cordage, fabrics

SI No.	Characteristic	SI Unit		Application
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
16.	Breaking length	Kilometre	km	Yarns
17.	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18.	Twist factor or twist multiplier	Turns per centimetre \times square root of tex Turns per metre \times square root of tex	$\left. \begin{array}{l} \text{turns/cm} \\ \times \sqrt{\text{tex}} \\ \text{turns/m} \\ \times \sqrt{\text{tex}} \end{array} \right\}$	Yarns (as appropriate)
19.	Bursting strength	Newton per square centimetre	N/cm ²	Fabrics
20.	Tear strength	Millinewton, newton	mN, N	Fabrics (as appropriate)
21.	Pile height	Millimetre	mm	Carpets
22.	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpets
23.	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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